

WHAT IS CLAIMED IS:

1. A system for electrically detecting a lack of saliva in an oral cavity of an individual and for electrically stimulating the oral cavity so as to induce production of saliva from at least one salivary gland, the system comprising:

(a) a control device for detecting a measure of salivation in the individual and for delivering electrical impulses to the oral cavity of the individual,

(b) a check device for checking a state of said control device and for modifying at least one parameter of said control device, and,

(c) a computer device for exchanging information with said check device.

2. The system of claim 1, wherein said control device includes:

(1) a hermetically sealed housing adapted to be fixable within the oral cavity,

(2) an electrical utility enclosed within said housing for detecting an input signal for detection of said measure of salivation and for generating said electrical impulses, said electrical utility including a power source and a signal generator, and

(3) at least one pair of electrodes electrically coupled to said electrical utility, said at least one pair of electrodes adapted for contact with a tissue of the oral cavity.

3. The system of claim 2, wherein said power source is a battery.

4. The system of claim 3, wherein said battery is rechargeable, and said electrical utility includes a charge battery block for charging said battery.

5. The system of claim 2, wherein said electrical utility further includes a microprocessor for controlling at least one parameter of said signal generator.

6. The system of claim 5, wherein said microprocessor includes a memory device for storing information about said at least one parameter.

7. The system of claim 6, wherein said memory device is configured for storing a set of operating rules.

8. The system of claim 7, wherein said memory device stores a predefined and preinstalled set of said operating rules.

9. The system of claim 2, wherein said at least one pair of electrodes are adapted to be used for more than one function.

10. The system of claim 9, wherein said more than one function is selected from the group consisting of emitting said electrical impulses, receiving said input signal, exchanging information between said control device and said check device, and recharging said power supply.

11. The system of claim 2, wherein said housing includes an electrically conductive exterior portion, said electrically conductive portion serving as a component of said at least one pair of electrodes.

12. The system of claim 2, wherein said housing is adapted to be implanted within said tissue of the oral cavity.

13. The system of claim 2, wherein said housing includes an attachment element adapted to attach said housing to at least one tooth.

14. The system of claim 13, wherein said attachment element is adapted so that said housing is capable of being repeatedly attached and removed by the individual.

15. The system of claim 13, wherein said at least one tooth is a mandibular tooth.

16. The system of claim 13, wherein said at least one tooth is selected from the group consisting of a premolar tooth and a molar tooth.

17. The system of claim 13, wherein said attachment element is a mouth guard.

18. The system of claim 13, wherein said attachment element includes at least one clasp for attaching said control device to said at least one tooth, said at least one clasp including at least one elastic jaw, whereby said at least one clasp fixes onto said at least one tooth by the pressure of said at least one jaw against said at least one tooth.

19. The system of claim 18, wherein said at least one jaw has a face, said face having an adhesion modification for increasing fixation of said at least one jaw to said at least one tooth.

20. The system of claim 19, wherein said face has a surface area and said adhesion modification increases the surface area of said face.

21. The system of claim 19, wherein said adhesion modification includes at least one groove on said face.

22. The system of claim 2, wherein said signal generator includes a mechanism for producing said impulses and said impulses are square waved shaped.

23. The system of claim 2, wherein said signal generator includes a mechanism for producing a series of said impulses, said impulses having an

intensity of between 10 and 200 microamperes, and each of said pulses lasting from 5 to 100 milliseconds.

24. The system of claim 1, wherein said control device is fixed in the oral cavity so as to preferably stimulate the submandibular and sublingual salivary glands.

25. The system of claim 1, wherein said measure of salivation is a relaxation time, said relaxation time being a measure of time required for a voltage difference between said at least one pair of electrodes to reach a predetermined level of an initial value of said voltage difference after a measuring pulse is applied.

26. The system of claim 25, wherein said predetermined level is selected from the group consisting of 40% and 50%.

27. A device for electrically detecting a measure of saliva in an oral cavity of an individual and for delivering electrical impulses to the oral cavity of the individual so as to induce production of saliva from at least one salivary gland, the device comprising:

(a) a hermetically sealed housing adapted to be fixable within the oral cavity,

(b) an electrical utility enclosed within said housing for detecting an input signal for detection of the measure of salivation and for generating the electrical impulses, said electrical utility including a power source and a signal generator, and

(c) at least one pair of electrodes electrically coupled to said electrical utility, said at least one pair of electrodes adapted for contact with a tissue of the oral cavity.

28. The device of claim 27, wherein said power source is a battery.

29. The device of claim 28, wherein said battery is rechargeable, and said electrical utility includes a charge battery block for charging said battery.

30. The device of claim 27, wherein said electrical utility further includes a microprocessor for controlling at least one parameter of said signal generator.

31. The device of claim 30, wherein said microprocessor includes a memory device for storing information about said at least one parameter.

32. The device of claim 31, wherein said memory device is configured for storing a set of operating rules.

33. The device of claim 32, wherein said memory device stores a predefined and preinstalled set of said operating rules.

34. The device of claim 27, wherein said at least one pair of electrodes are adapted to be used for more than one function.

35. The device of claim 34, wherein said more than one function is selected from the group consisting of emitting the electrical impulses, receiving the input signal, exchanging information between the device and a check device, and recharging said power supply.

36. The device of claim 27, wherein said housing includes an electrically conductive exterior portion, said electrically conductive portion serving as a component of said at least one pair of electrodes.

37. The device of claim 27, wherein said housing is adapted to be implanted within said tissue of the oral cavity.

38. The device of claim 27, wherein said housing includes an attachment element adapted to attach said housing to at least one tooth.

39. The device of claim 38, wherein said attachment element is adapted so that said housing is capable of being repeatedly attached and removed by the individual.

40. The device of claim 38, wherein said at least one tooth is a mandibular tooth.

41. The device of claim 38, wherein said at least one tooth is selected from the group consisting of a premolar tooth and a molar tooth.

42. The device of claim 38, wherein said attachment element is a mouth guard.

43. The device of claim 38, wherein said attachment element includes at least one clasp for attaching said control device to said at least one tooth, said clasp including at least one elastic jaw, whereby said clasp fixes onto said at least one tooth by the pressure of said at least one jaw against said at least one tooth.

44. The device of claim 43, wherein said at least one jaw has a face, said face having an adhesion modification for increasing fixation of said at least one jaw to said at least one tooth.

45. The system of claim 44, wherein said face has a surface area and said adhesion modification increases the surface area of said face.

46. The system of claim 44, wherein said adhesion modification includes at least one groove on said face.

47. The device of claim 27, wherein the device is fixed in the oral cavity so as to preferably stimulate the submandibular and sublingual salivary glands.

48. The device of claim 27, wherein the measure of salivation is a relaxation time, said relaxation time being a measure of time required for a voltage difference between said at least one pair of electrodes to reach a predetermined level of an initial value of said voltage difference after a measuring pulse is applied.

49. The device of claim 48, wherein said predetermined level is selected from the group consisting of 40% and 50%.

50. The device of claim 27, wherein said signal generator includes a mechanism for producing said impulses and said impulses are square waved shaped.

51. The device of claim 27, wherein said signal generator includes a mechanism for producing a series of the impulses, the impulses having an intensity of between 10 and 200 microamperes, and each of said pulses lasting from 5 to 100 milliseconds.

52. A method for electrical stimulation of salivation comprising the steps of:

(a) attaching a device for electrically detecting a measure of saliva in an oral cavity of an individual and for delivering electrical impulses to said oral cavity of said individual so as to induce production of saliva from at least one salivary gland, said device having at least one pair of electrodes, said electrodes being placed against a tissue of said oral cavity,

(b) detecting an input signal indicative of said measure of moisture within said oral cavity,

(c) comparing said measure to a moisture limit value, and

(d) delivering said electrical impulses based on a result of said comparing.

53. The method of claim 52, wherein said steps (b) through (d) are repeated iteratively.

54. The method of claim 52, wherein said device includes a housing, said housing includes an attachment element for attaching said device to at least one tooth within said oral cavity.

55. The method of claim 54, wherein said attachment element includes at least one clasp for attaching said device to said at least one tooth, said at least one clasp including at least one elastic jaw, whereby said at least one clasp fixes onto said at least one tooth by the pressure of said at least one jaw against said at least one tooth.

56. The method of claim 52, wherein the method further includes the step of modifying a parameter of said device.

57. The method of claim 52, wherein said measure of salivation is a relaxation time, said relaxation time being a measure of time required for a voltage difference between said at least one pair of electrodes to reach a predetermined level of an initial value of said voltage difference after a measuring pulse is applied.

58. A housing for an intraoral device, the intraoral device being configured so as to be fixable to at least one tooth within an oral cavity of an individual, the housing comprising:

- (a) a body and
- (b) an attachment element for fixing said body to the at least one tooth, wherein,

said attachment element includes at least one clasp for attaching said body to said at least one tooth, said at least one clasp including at least one elastic jaw, whereby said at least one clasp fixes onto said at least one tooth by the pressure of said at least one jaw against said at least one tooth.

59. The housing of claim 58, wherein said at least one jaw has a face, said face having an adhesion modification for increasing fixation of said at least one jaw to said at least one tooth.

60. The housing of claim 58, wherein said face has a surface area and said adhesion modification increases the surface area of said face.

61. The system of claim 58, wherein said adhesion modification includes at least one groove on said face.